Conservation Strategy Option 4 - Isolated Conveyance Facility

Initial working model operational parameters for BDCP Option 4[1] – Below Normal Water Year.

Option 4 Summary: All SWP and CVP diversions would occur at a new facility on the Sacramento River with a state-of-the-art positive barrier fish screen and water would be conveyed via a peripheral aqueduct with the SWP/CVP facilities fully isolated from the Delta. Opportunities for habitat restoration and enhancement under Option 4 could be applied Delta-wide. Fluctuating salinity conditions could be implemented with the greatest flexibility and extent of the four options.

Parameter	Range		Rationale
Operational condition and seasonal time period used as a model input and/or output	*A range of values for a given operational condition intended to reflect alternative hypotheses or interpretations of available data*		*The rationales generally reflect the intended result of the parameter*
Delta Salinity Standards	Manage to D-1641 agricultural (e.g., Jersey Point) standards	Do not manage specifically to meet water quality standards – variable salinity	Evaluation parameter to assess the range of variable salinity conditions that could occur and assess changes in aquatic habitat conditions as well as impacts on other Delta uses
Sacramento River at Rio Vista			
Sept-Oct	4,000 cfs	5,000 cfs	Adult Chinook salmon attraction and migration flows – the range is based on
Nov-Dec	4,000 cfs	5,000 cfs	Juvenile salmon and steelhead migration/survival, pre-spawning migration by delta smelt, splittail, and others - the range is based on
Jan-Jun	5,000 cfs	9,000 cfs	Juvenile salmon and steelhead

[1] These operational parameters have been developed by the SAIC team, which is providing support to the BDCP Steering Committee. They are intended to enable the SAIC team to undertake a coarse modeling of the different conservation strategy options now undergoing a comparative evaluation to assist the Steering Committee in narrowing down the options for purposes of furthering the planning process. They are not designed to, nor intended to, represent proposed operational parameters for the system by either the SAIC team or any entity on the Steering Committee, nor should they be misconstrued as such.

			migration/survival, pre-spawning migration by delta smelt, splittail, and others - the range is based on Rio Vista flows from CALSIM for below normal and above normal water years
Jul-Aug	2,000 cfs	4,000 cfs	Steelhead and salmon rearing within the mainstem river; support resident fish habitat - the range is based on
San Joaquin River flow at Vernalis			
May	D-1641 flow requirements	D-1641 flow requirements	The available relationships show a positive response with increasing spring flows; flows for salmon migration; nutrient transport to Delta; juvenile splittail rearing and dispersal
Jul-Sep	No criterion	No criterion	Evaluation parameter
Oct	1,400 cfs	2,000 cfs	Attraction flows and improved water quality (DO and temperature) for adult salmon migration – equivalent to D-1641
Nov-Jan	D-1641 water quality requirements	1,500 cfs	Salmon fry rearing and dispersal, nutrient transport to Delta, Splittail spawning and larval rearing and dispersal
Feb-Apr and Jun	D-1641 flow requirements of approximately 1,420 cfs	D-1641 flow requirements of approximately 2,280 cfs	D-1641 X_2 contribution results in a range of San Joaquin River flows
X2			
Feb-June (assumes improved habitat in central Delta)	D-1641 X_2 locations	66 km	The range of X_2 locations during the late winter-spring is intended to reflect (1) the current regulatory requirements and (2) an expansion of low-salinity habitat further downstream within Suisun Bay (66 km)
Jul-Jan	No criterion	No criterion	Evaluation parameter
Total Delta Outflow	No criterion	No criterion	Evaluation parameter
Hydraulic Residence Time in Selected	No criterion	No criterion	Evaluation parameter

Delta Channels			
DCC			
Feb-Jun	Closed	Closed	Reduce movement of juvenile salmon and steelhead into the interior Delta; improve juvenile salmon survival by reducing vulnerability to in-Delta diversions,
Jul-Jan	Closed	Closed	Open as needed for water quality enhancement within the central and southern Delta
HORB –			
Year-round	Open	Open	Increase flows and flushing within the southern Delta to improve water quality
Old River Flows			
Year-round	No criterion	No criterion	Evaluation criteria
Middle River Flows			
Year-round	No criterion	No criterion	Evaluation criteria
QWEST			
Year-round	No criterion	No criterion	Evaluation criteria
SWP/CVP Diversions			
Mar-May	Not to exceed 15,400 cfs	Model output not to exceed 6,000 cfs	The range in diversion rates reflects (1) the location of the point of diversion is upstream of the primary habitat of delta smelt and therefore the risk of entrainment is low; the positive barrier fish screen is expected to be effective in excluding juvenile salmon and other fish from the diversion, and (2) a number of fish species spawn upstream of the point of diversion during the spring and have planktonic eggs and larvae that could be vulnerable to entrainment, reduce the diversion of nutrients and food supply for the Delta during the key spring months
Jun-Feb	Not to exceed 15,400 cfs	No criterion	Evaluation parameter

Assumptions:

- Water conveyance and south of Delta storage are assumed to not limit diversion operations– model evaluation parameter.

- Upstream reservoir storage and releases will be made in accordance with current requirements to support salmon and steelhead habitat and maintain suitable water temperatures and compliance with existing agreements and regulatory requirements including FERC conditions and ESA requirements.

- Option 4 assumes SWP and CVP pumping operations would occur exclusively from a state-of-the-art positive barrier fish screen located on the Sacramento River in the general vicinity of Hood and isolated water conveyance canal with an Intertie to both the SWP and CVP diversion facilities in the south Delta. The existing south Delta diversion facilities would not be used for water diversions from the Delta.